

**AMENDMENTS TO THE CLAIMS:**

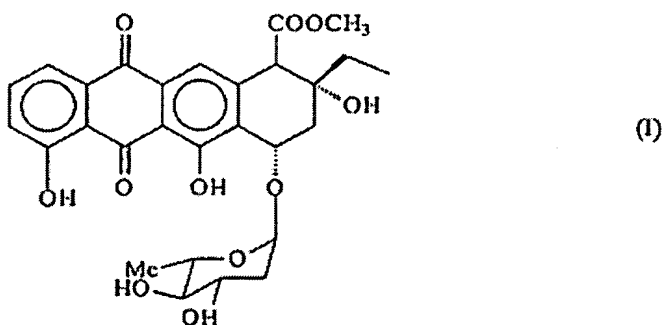
This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

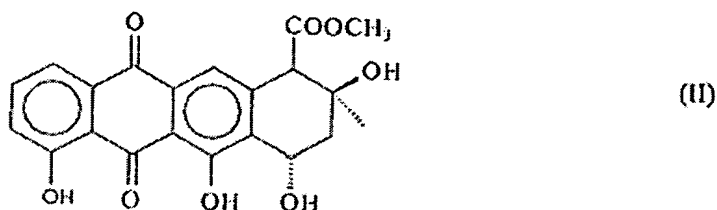
1. (currently amended) Isolated and purified ~~DNA~~ polynucleotide fragment, which ~~is~~ comprises the gene cluster for the antracycline biosynthetic pathway of the bacterium *Streptomyces nogalater*, being included in a 10kb and a 7kb flanked *Bgl*III fragments of *S. nogalater* genome.
2. (currently amended) ~~The DNA fragment according to claim 1,~~ An isolated polynucleotide molecule comprising ~~the~~ a nucleotide sequence given in SEQ ID NO:1, or a sequence showing at least 80% homology to said sequence.
3. (currently amended) A recombinant ~~DNA~~ polynucleotide, which comprises the ~~DNA~~ polynucleotide fragment according to claim 1, cloned in a plasmid capable of replicating in *Streptomyces*.
4. (currently amended) The recombinant ~~DNA~~ polynucleotide according to claim 3, which is ~~the~~ plasmid pSY15c, comprising a 1.4 kb *Bam*HI-*SAC*I fragment from ~~the~~ plasmid pSY42 and a 1.1 kb *Mlu*I-*Kpn*I fragment from ~~the~~ plasmid pSY43.
5. (original) Plasmid pSY42, deposited in *S. lividans* strain TK24/pSY42 with the deposition number DSM 12451.
6. (original) Plasmid pSY43, deposited in *S. lividans* strain TK24/pSY43 with the deposition number DSM 12452.
7. (currently amended) A process for the production of hybrid compounds, comprising transferring the ~~DNA~~ polynucleotide fragment according to claim 1 into a *Streptomyces* host, cultivating the recombinant strain obtained, and isolating the compounds produced.
8. (original) The process according to claim 7, wherein the *Streptomyces* host is a *Streptomyces galilaeus* host.

9. (currently amended) The process according to claim 8, wherein the *Streptomyces galilaeus* host is selected from the group consisting of strains H026, H039, H063 and H075, which are mutant strains of *S. galilaeus* ATCC 31615.

10. (currently amended) The process according to claim 8, wherein an antracycline is produced, which has ~~the following~~ formula I



11. (currently amended) The process according to claim 8, wherein an antracyclinone is produced, which has ~~the following~~ formula II



12. (currently amended) A process for the production of hybrid compounds, comprising transferring at least one ~~of the genes~~ polynucleotide selected from the group consisting of *snogJ*, *snogA*, *snoaM*, *snogN*, *snoaG*, *snogC*, *snogK*, *snoaL*, *snoK*, *snogD*, *snoW*, *snogE*, *snoL*, *snoO* and *snoaF* into a *Streptomyces* host, said genes polynucleotide being derived from the ~~DNA~~ fragment of claim 1, to obtain a recombinant strain, cultivating the recombinant strain obtained, and isolating the compounds produced.

13. (currently amended) The process according to claim 12, wherein ~~the gene~~ *snoaL* encoding NAME cyclase is transferred into a *Streptomyces* host.

14. (currently amended) The process according to claim 12, wherein at least one of ~~the genes~~ *snogD* and *snogE* encoding glycosyl transferases is transferred into a *Streptomyces* host.

15. (currently amended) The process according to claim 12, wherein at least one of ~~the genes~~ *snogJ*, *snogN*, *snogC*, *snogK* and *snogA* affecting the formation of nogalamine and nogalose is transferred into a *Streptomyces* host.

16. (currently amended) A recombinant ~~DNA~~ polynucleotide, which comprises the ~~DNA fragment~~ polynucleotide molecule according to claim 2, cloned in a plasmid replicating in *Streptomyces*.

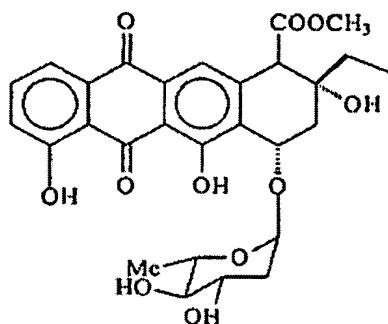
17. (currently amended) The recombinant ~~DNA~~ polynucleotide according to claim 16, which is the plasmid pSY15c, comprising a 1.4 kb *Bam*HI-*Sac*I fragment from the plasmid pSY42 and a 1.1 kb *Mlu*I-*Kpn*I fragment from the plasmid pSY43.

18. (currently amended) A process for the production of hybrid compounds, comprising transferring the ~~DNA fragment~~ polynucleotide molecule according to claim 2 into a *Streptomyces* host to obtain a recombinant strain, cultivating the recombinant strain obtained, and isolating the compounds produced.

19. (previously presented) The process according to claim 18, wherein the *Streptomyces* host is a *Streptomyces galilaeus* host.

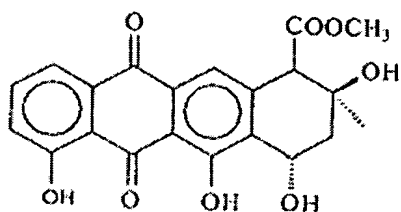
20. (currently amended) The process according to claim 19, wherein the *Streptomyces galilaeus* host is selected from the strains consisting of H026, H039, H063 and H075, which are mutant strains of *S. galilaeus* ATCC 31615.

21. (currently amended) The process according to claim 19, wherein an anthracycline is produced, which has ~~the following~~ formula I



(I)

22. (currently amended) The process according to claim 19, wherein an anthracyclinone is produced, which has the following formula II



(II)

23-26. (cancelled)